

Strategy Research Project

Joint Logistics Over-the-Shore: Increasing the Speed of Response

by

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Class of 2013

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REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188	
<p>The public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.</p>					
1. REPORT DATE (DD-MM-YYYY) xx-03-2013		2. REPORT TYPE STRATEGY RESEARCH PROJECT		3. DATES COVERED (From - To)	
4. TITLE AND SUBTITLE Joint Logistics Over-the-Shore: Increasing the Speed of Response				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) Colonel Tom L. Clady United States Army				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Mr. Scott T. Forster Center for Strategic Leadership				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) U.S. Army War College 122 Forbes Avenue Carlisle, PA 17013				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION / AVAILABILITY STATEMENT Distribution A: Approved for Public Release. Distribution is Unlimited.					
13. SUPPLEMENTARY NOTES Word Count: 5757					
14. ABSTRACT <p>The 21st century strategic environment poses challenges for the United States to protect its global interests. U.S. strategy now focuses on the Asia-Pacific after a decade of war in the Middle-East. Potential adversaries will attempt to deny U.S. access across the global commons and attempt to limit U.S. pursuit of its interests. The United States has significant economic interests in the Asia-Pacific region. Logistics-Over-the-Shore (LOTS) operations have played a role in U.S. military strategy since the colonial times. This SRP examines the history of Joint Logistics Over-the-Shore (JLOTS). This SRP also addresses LOTS' roles in strategic response capabilities: prepositioning, forward-basing, and force projection. Finally, it argues that LOT's relevance can be assumed, through ongoing initiatives, to increase interoperability with U.S. Navy LOTS equipment and through LOTS' integration into the seabasing concept. LOTS operations will play a significant role in overcoming anti-access/area-denial (A2/AD) challenges in the region. LOT's stakeholders should continue to update plans, to develop technology, and to demonstrate its value in strengthening the nation's security.</p>					
15. SUBJECT TERMS Force Projection, Sustainment, Lighterage, Anti-Access/Area-Denial					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT UU	18. NUMBER OF PAGES 36	19a. NAME OF RESPONSIBLE PERSON
a. REPORT UU	b. ABSTRACT UU	c. THIS PAGE UU			19b. TELEPHONE NUMBER (Include area code)

USAWC STRATEGY RESEARCH PROJECT

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Abstract

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Report Date: March 2013

Page Count: 36

Word Count: 5757

Key Terms: Force Projection, Sustainment, Lighterage, Anti-Access/Area-Denial

Classification: Unclassified

The 21st century strategic environment poses challenges for the United States to protect its global interests. U.S. strategy now focuses on the Asia-Pacific after a decade of war in the Middle-East. Potential adversaries will attempt to deny U.S. access across the global commons and attempt to limit U.S. pursuit of its interests. The United States has significant economic interests in the Asia-Pacific region. Logistics-Over-the-Shore (LOTS) operations have played a role in U.S. military strategy since the colonial times. This SRP examines the history of Joint Logistics Over-the-Shore (JLOTS). This SRP also addresses LOTS' roles in strategic response capabilities: prepositioning, forward-basing, and force projection. Finally, it argues that LOT's relevance can be assumed, through ongoing initiatives, to increase interoperability with U.S. Navy LOTS equipment and through LOTS' integration into the seabasing concept. LOTS operations will play a significant role in overcoming anti-access/area-denial (A2/AD) challenges in the region. LOT's stakeholders should continue to update plans, to develop technology, and to demonstrate its value in strengthening the nation's security.

Joint Logistics Over-the-Shore: Increasing the Speed of Response

Logistics Over-the-Shore (LOTS) operations have been a part of the U.S. military's strategy for enabling operational maneuver and sustainment of forces since the colonial era. Logistics operations support the deployment, sustainment, and redeployment of forces from installations and depots across the strategic, operational, and tactical spectrums of war. Strategic logistics is one part of a system that supports national policy by other means. Army logistics operations enable maneuver at the most fundamental level; logistics provide the means to maintain the military advantage. This SRP examines the history of Joint Logistics Over-the-Shore (JLOTS) operations, the current strategic environment, the relevancy of JLOTS operations, the role in strategic response capabilities, and the options and ongoing initiatives to overcome shortfalls and increase relevance, in particular in the U.S. Pacific Command's (USPACOM) Area of Responsibility (AOR). The relevance of logistics depends on application of effective logistics enablers at the right time and place to support our armed forces.

The U.S. military has employed amphibious operations to support its tactical, operational, and strategic objectives throughout history. According to Donald Boose, the U.S. military's amphibious heritage began in the colonial era: The geography of the North American continent, with its multiple waterways, was ideal for waterborne operations.¹ He further explains that British and colonial troops' conduct of a series of expeditions against the French in 1645 are the earliest recorded amphibious operations in North America.² U.S. interests around the world drove the Army, Navy, and Marine Corps to pursue amphibious doctrine and program development after the end of the World War I. Modern amphibious operations began in World War II when they were employed for combat assaults onto beaches. Donald Boose describes the various

operations during World War II that were conducted throughout the Pacific theater of operations that supported the Mediterranean theater of operations, that were used to invade the Aleutian Islands, and that ultimately supported the Allied Forces' cross-channel invasion of Europe during Operation Overlord at Normandy.³ The U.S. military used amphibious operations again during the Korean War in support of combat operations. However, during the Korean War, troops, cargo, and equipment often had to be transferred from ships anchored in a harbor by means of various landing ships, landing craft, and other lighters to be carried ashore. These transfers were necessary because of inadequate dock facilities or tidal variance on the west coast of the peninsula.⁴ These sustainment operations developed into our current LOTS operations.

In 1987, the Joint Chiefs of Staff Implementation Plan established U.S. Transportation Command (USTRANSCOM) and designated it as the organization with oversight responsibilities for JLOTS programs.⁵ Strategic sealift is a USTRANSCOM core mission that entails delivery of forces and their sustainment into a theater of operation. As a functional combatant command with global visibility of strategic transportation requirements and ongoing operations, its oversight of JLOTS capabilities provides the Department of Defense (DOD) with a single source for fulfilling requirements to move cargo ashore. USTRANSCOM supports the deployment process by providing strategic movement of forces and materiel around the world in support of operational commanders.⁶ These strategic transportation movements are carried out by airlift and sealift of forces and cargo to locations around the world. As the most cost-effective and fastest way to deliver large quantities of material in one lift, sealift accounts for 90 percent of all DOD cargo movements.⁷ USTRANSCOM now needs the

capability to deploy forces and provide logistics support in A2/AD areas where seaports have been denied or damaged, or are inadequate or non-existent.⁸ JLOTS provides a viable logistics course of action to deliver forces and sustainment into an area of operation.

Military history has proven undeniably that the capability to project forces onto unprepared beaches and to sustain those forces during combat operations using beaches and in-stream discharges remains a credible requirement. The U.S. military used and refined over-the-shore amphibious operations and LOTS operations throughout the 20th century. LOTS capabilities were used in Vietnam, Grenada, Panama, and during both wars with Iraq.⁹ Twenty-first century operations have proven to be no different in the matter of projecting and sustaining forces in these environments, just as the U.S. military depends on large modern ports to project power. But a potential adversary may attempt to deny or delay the deployment of forces through simple methods – through the use of mines, submarines, special forces, terrorism, sabotage, or tactical ballistic missiles.¹⁰

The 21st century strategic environment presents a new challenge to the United States: Future adversaries will rely on a strategy to deny U.S. access to critical areas to limit the U.S. military's reach. Potential adversaries have developed new weapons that provide the ability to deny U.S. forces access to seaports, waterways, and key terrain. These technologically advanced weapons have longer range capabilities; they are able to deny access and freedom of action in an operational area – often by armed opposition¹¹. Also, potential adversaries are well aware that the United States has been dramatically concentrating its military force – a Continental U.S. (CONUS)-centric force.

This reduction in U.S. forward presence has reduced close access to prospective operational areas. As the sole remaining superpower after the Cold War, the United States now must address this challenge.

So the 21st century began with a new focus for the U.S. military. The United States began to reorient its military strategy away from the humanitarian and peacekeeping interventions that prevailed in the last decade of the 20th century in order to refocus on the mission to counter and defeat conventional threats.¹² Capitalizing on the peace dividend, the U.S. military conducted humanitarian operations in Somalia and Haiti during that decade – countries with degraded seaports. However, this new focus was short-lived due to the 9/11 terrorist attacks on the World Trade Center and the Pentagon.

After 9/11, the U.S. strategy directed the nation's military to defeat terrorism, in particular Al Qaeda – the organization responsible for the attacks on the World Trade Center and the Pentagon. The U.S. military has remained heavily engaged in combat operations in Iraq and Afghanistan throughout the first decade of the new century. In order to achieve its objectives to counter violent extremism, the United States applied its instruments of power – military, economic, and information resources – to target Al Qaeda operations and finances in order to isolate and defeat its terrorist network. This focus on Al Qaeda meant that other U.S. interests around the globe have taken a back seat as violent extremism mounted a serious challenge to the United States. As operations in Iraq wound down after the 2008 presidential election, U.S. forces began a phased withdrawal from Iraq. The new U.S. strategy called for increased military pressure on Al Qaeda's perceived center of gravity in Afghanistan, which has no

seaport access and thus challenges U.S. logistical support of its forces in Afghanistan. The U.S. must rely on the closest seaport in Pakistan to sustain U.S. and allied forces in Afghanistan.

The U.S. military depends on sealift to project and sustain forces around the world, which provides the means to deter regional aggression, to protect U.S. national interests, and to achieve U.S. strategic goals. The protracted operations in Iraq and Afghanistan have consumed vast amounts of military and diplomatic resources. Our focus on these operations has negatively impacted U.S. policy in the Asia-Pacific Region as U.S. forces in the Asia-Pacific region have been deployed to the Central Command (USCENTCOM) area of operations. The United States cannot afford to discount the emerging threat from the People's Republic of China – especially its capability to deny access on the global commons, particularly the ocean waterways in the Pacific Rim. The USPACOM AOR consists of half of the earth's surface – stretching from the west coast of the United States to India and from Antarctica to the North Pole.¹³ JLOTS provides a strong capability to project and sustain U.S. military power and demonstrate U.S. will to defend allies in the region.

As the United States moved out of the first decade of the 21st century that was marked by a large land-power campaign in Iraq, the new national defense guidance was published, *Sustaining U.S. Global Leadership: Priorities for the 21st Century (2012)*. This guidance focused on countering emerging threats; it rebalanced the U.S. security focus toward the Asia-Pacific region.¹⁴ This change acknowledges that the U.S. economic system and interests are closely intertwined with the security and prosperity of that region.¹⁵ China's economic growth and expanding military power created the

conditions that led to the revised U.S. global strategy. Forsaking “Shock and awe” and large-scale operations, the new strategy has shifted to reliance on partner engagement and theater shaping in the Asia-Pacific region.¹⁶

In the current strategic environment, China looms as the next adversary capable of challenging U.S. interests – especially in the Asia-Pacific region.¹⁷ China’s economic growth provides the means to continue to build its military and continue to challenge regional neighbors. China’s naval power poses a potential threat to the region’s sea lines of communication, with implications for global commerce. Oceans cover a vast amount of the earth’s surface. And the Pacific Ocean is the largest – covering almost a third of the planet.¹⁸ The U.S. strategy is designed to protect its interests around the world – interests that are important to the nation’s survival, that are vital for its economic prosperity, and that are needed for its allies and partners to maintain a balance of power throughout the world.

Recent actions by the Chinese government have created tension with other nations in the region. China continues to contest historical ownership of various islands and waterways; it continues to exert its regional influence; it has the potential to change the balance of power in the Pacific Rim. The U.S. military will continue to execute strategic missions that include protecting the global commons, reassuring partners and allies of its commitment, and fighting and winning conflicts when necessary.¹⁹ As a global power with global interests, the United States maintains freedom of navigation across the sea domain and enables the flow of commerce across the ocean. It demonstrates resolve to counter likely threats – even into areas where potential

adversaries attempt to deny access through both long- range and short-range tactics known as Anti-access/Area-denial (A2/AD).²⁰

Current economic conditions throughout the world and fiscal constraints on the U.S. military will significantly affect future military capabilities. Our national military strategy will have to critically assess the nation's ability to overcome challenges in global response to threats in order to support the Geographic Combatant Commands (GCC). All tools of U.S. power – diplomatic, information, military, and economic (DIME) – will be used to influence and shape the strategic environment. To meet the challenges of the 21st century, the Joint Force will rely on a limited forward posture, power projection, and prepositioning to counter threats in the strategic environment. This force will be smaller and rapidly employable; it will aggregate, reconfigure, and disaggregate as required.²¹ Significantly, JLOTS-capable forces that are forward-based along with prepositioned equipment will enable the entry of forces into an area of operations and will enable long-term sustainment.

The new strategic environment requires the U.S. military to maintain capabilities to overcome A2/AD challenges – not unlike the need to execute amphibious or JLOTS operations throughout U.S. history. The 2012 Defense Strategic Guidance (DSG) lists ten primary missions of the U.S. military: One is to be able to project power in areas in which our access and freedom to operate are challenged.²² A JLOTS operation can provide this capability. JLOTS has clear relevance in the current strategic environment. The Joint Force can prevail over A2/AD campaigns through use of the capabilities inherent in the U.S. Marine Corps, the Navy, and the Army. Doctrinally, the U.S. Marine Corps conducts an amphibious operation to secure a beach or other facilities. This

allows entry of Navy vessels to discharge cargo and supplies. Then a follow-on JLOTS operation moves other combat forces and sustainment ashore.

The U.S. military has dramatically reduced its forward presence since the end of the Cold War and throughout the beginning of the 21st century. The U.S. strategy now relies more on CONUS-based power projection forces that depend on U.S.

Transportation Command's strategic airlift and sealift, part of the strategic mobility triad, to rapidly respond to a wide range of threats. The U.S. strategic mobility triad consists of airlift, sealift, and prepositioning.²³ Prepositioned equipment and supplies that are forward-based in strategic locations around the world facilitate rapid deployment by reducing the sealift requirements for heavy combat forces. Prepositioned equipment validates U.S. commitment to allies and partners around the world. The prepositioned stocks include capabilities that take longer to strategically deploy to an operational area; they include high-demand but low-density Army watercraft and other LOTS equipment. The LOTS equipment provides the capability for Joint Forces to conduct JLOTS operations to overcome A2/AD challenges and demonstrate U.S. capability to move its forces securely to shore.

Even though the U.S. forward presence has been reduced, a credible forward U.S. posture is maintained with some strategically located forward-based forces capable of deterring and countering potential adversaries until arrival of follow-on CONUS-based forces. This forward basing includes limited JLOTS-capable Army watercraft.

The U.S. Army and the U.S. Navy both have LOTS capabilities in support of their Title 10 missions; however, they seldom conduct LOTS operations independent of each

other. USTRANSCOM describes JLOTS as an operation in which the Army and the Navy establish LOTS operations combined under a unified commander or Joint Task force.²⁴ In his *Army Logistician* article, Nathaniel Glover designates LOTS operations as logistics operations that move forces and sustainment by utilizing lighterage for subsequent discharge over a bare beach or into a suitable port.²⁵ Joint Publication 4-01.6 further explains that during these operations, cargo is discharged from deep draft ships that cannot navigate into commercial seaports due to port limitations.²⁶ Regardless of the various attempts to define LOTS operations, they are an important enabler; often they require many mutually supporting efforts.

DoD Directive 5100.01, *Functions of the Department of Defense and its Major Components*, specifies Army and Navy LOTS requirements. Each Service has developed LOTS programs and acquired equipment to meet their requirements. Each Service's unique missions have shaped the type of capabilities they developed, fielded, and used to support their operations – capabilities that are needed in joint operations. The Navy's program is designed to support Marine amphibious operations, whereas the Army's program supports theater logistics and intra-coastal transportation operations.²⁷ The Army's LOTS requirements include "conduct riverine operations" and "provide logistics to joint operations and campaigns, including joint over-the-shore and intra-theater transport of time-sensitive, mission-critical personnel and materiel."²⁸ The Navy developed its capabilities to "conduct riverine operations" and "provide naval expeditionary logistics to enhance the deployment, sustainment, and redeployment of naval forces and other forces operating within the maritime domain, to include joint sea bases, and provide sea transport for the Armed Forces other than that which is organic

to the individual Military Services and USSOCOM.”²⁹ To carry out these designated tasks, both services budget and develop appropriate programs and equipment.

Regardless of the specific differences in the Army and Navy LOTS programs, they have common capabilities to move cargo from ship to shore. Because most strategic and operational missions are conducted in a Joint environment, interoperable equipment is needed to provide seamless transfer of equipment from ship to shore. Each Service’s causeway systems provide an example of common equipment with different characteristics. Both the Army and Navy developed individualized causeway systems for their respective missions. The Army’s system is designed to fit into container cells of a containership, which enables deployments because it is modular and easily configured.³⁰ The Navy developed a larger system, the elevated causeway system (ELCAS) that is more difficult to install.³¹ The ELCAS does not interface well with Army lighterage.³²

LOTS operations involve more than U.S. Marine amphibious assaults and follow-on movement of sustainment cargo by the Army in support of land campaigns. The unique characteristics of the various types of equipment enables them to support a broad range of missions – more than moving cargo ashore. The nature of the equipment and its use has evolved over time as the requirements to support forces and operations have changed. Requirements across combatant commands differ based on geography and mission. USTRANSCOM’s JLOTS Handbook explains some of the other uses of LOTS equipment in order to support operations: discharge of liquid cargo in support of the Joint Force; intratheater sealift of cargo and equipment; and support of fixed-port operations.³³ USTRANSCOM’s description of the various uses of LOTS

equipment in operations demonstrates the complexity of JLOTS operations, which require trained and ready personnel to execute these operations. A small number of personnel operating watercraft or employing causeway systems can support operational maneuver of forces.

In pursuit of its global interests, the United States must maintain its capability to project military force into any region of the world. Indeed, large-scale deployments have always depended on intertheater sealift.³⁴ The U.S. capability to project forces has been practically unrestricted since World War II.³⁵ The Joint Operational Access Concept (JOAC) describes recent U.S. deployments in support of the 1991 Persian Gulf War, the 2001 invasion of Afghanistan, and the 2003 invasion of Iraq as unopposed.³⁶ However, the future operational environment of U.S. forces may not offer the same level of access.

Moving equipment from CONUS to an operational area is not in itself sufficient. Our modern military requires suitable seaports of debarkation in order to conduct and sustain operations.³⁷ When seaports of debarkation are not available due to geography or an adversary's A2/AD tactics, amphibious operations followed by JLOTS operations provide the capability to deploy and sustain land-based forces. This capability is enhanced by the U.S. military's ability to conduct over-the-shore and in-stream operations when access to seaports of debarkation has been hindered. There will always be situations in which ideal ports are denied or are substandard – or are too far from the operational area.³⁸

The current U.S. operations in Afghanistan provide an example of a land-locked country in which the closest seaport infrastructure is in Pakistan – far from the

operational area. Supplies are moved by commercial trucking companies from the Port of Karachi inland to Afghanistan. By closing the border crossings from Pakistan to Afghanistan for diplomatic reasons, the government of Pakistan effectively conducted area-denial operations that impacted U.S. deployment and sustainment capabilities. As the U.S. national strategy shifts to the Asia-Pacific, it is imperative to maintain the capability to deploy and sustain forces in the region. JLOTS remains a vitally important tool in an area dependent on sea lines of communication and the freedom of navigation for commerce.

Execution of the Army's strategy to support combatant commands in execution of their contingency plans and to accomplish a JLOTS mission depends on prepositioning a limited number of key assets, forward stationing of a limited number of assets in the USPACOM and the USCENTCOM AORs, and a deployment plan for follow-on watercraft and JLOTS capable forces, primarily based out of Joint Base Langley-Eustis. Each of these components in the strategy mitigates the inherently slow process of activating these low-density, high-demand capabilities. The mitigating components provide faster deployment timelines, but they have associated challenges with regard to logistics time and distance factors and/or administrative factors that impact combatant command plans.

Combatant commands have developed JLOTS implementation plans based on Cold War requirements. However, JLOTS requirements are enduring in their area of responsibilities (AORs). These requirements include major regional conflicts, along with peacekeeping and humanitarian operations. However, there are current challenges in the deployment and employment of JLOTS-capable equipment and trained personnel in

support of operations. The challenges are posed by time and distance factors – in particular in the USPACOM area of operations. The strategic re-balance to the Asia-Pacific requires a strategic assessment of these challenges.

To preposition JLOTS-capable equipment globally, both Army and Navy logisticians need specific capabilities. JLOTS equipment by its very nature consists of low-density equipment that may be in high demand in a short time. The Army's program, Army Prepositioning Stock (APS), prepositions stocks in Kuwait and Japan. Army storage locations contain JLOTS-capable equipment to support Army operations. APS-4 and APS-5 contain watercraft and a Modular Causeway System (two roll-on/roll-off discharge facilities, one floating causeway, one causeway ferry, and six warping tugs).³⁹ The Navy maintains its prepositioned JLOTS equipment in the Maritime Prepositioning Force (MPF) program. This equipment is stored onboard vessels in Maritime Prepositioning Squadrons. Three MPSRON squadrons, which consist of up to six ships each, support the Navy and operate in the Mediterranean Sea, in the Western Pacific Ocean, and in the Indian Ocean.⁴⁰

Prepositioned storage of JLOTS-capable equipment in APS provides the capability to rapidly deploy forces to an area of operations. However, other factors impact their employment. Even though APS issue procedures emphasize speed and efficiency, APS equipment must be tailored and configured for a given specific purpose after it is issued.⁴¹ Once JLOTS equipment has been issued, the equipment must be transported to its designated users or area of operation.⁴² Geography as well as time and distance factors impact its movement to the final employment site. USPACOM'S AOR is so vast that this movement could take considerable time. In an article in *Army*

Sustainment, Colonel Hickens shows that unless prepositioned assets are within 100 miles of their final employment location, they will probably arrive too late to affect an operation.⁴³

Table 1. Army Prepositioned JLOTS Assets⁴⁴

APS-4 Japan		APS-5 Kuwait	
Vessel Type	Number	Vessel Type	Number
LCU-2000	10	LCU-2000	10
LCM-8	9	LCM-8	9
LT-800	2	LT-800	1
LT Flight III	0	LT Flight III	1
ST-900	4	ST-900	4
BD-115	1	BD-115	1
Barge Fuel	1	Barge Fuel	1
MCS	1	MCS	1

As part of the forward-basing and rapid response strategy, the Army distributed a small number of watercraft and JLOTS enablers forward. One Logistics Support Vessel (LSV) currently supports operations out of Kuwait; three are available in Hawaii.⁴⁵ In support of theater contingency plans, each of these AORs also have 27 pre-positioned watercraft assets, including one Modular Causeway System each in APS-4 and APS-5 storage.⁴⁶ Forward-stationing and prepositioning of Army watercraft significantly reduce the response time to support combatant commanders. As the Asia-Pacific region assumes greater strategic significance, the Army should consider increasing logistics capacity there and reducing response times. This would require a serious review of the JLOTS capabilities currently in CONUS and possibly require relocations of equipment to the Asia-Pacific. We have an opportunity to greatly increase the available payload capability and to reduce response time in the region.

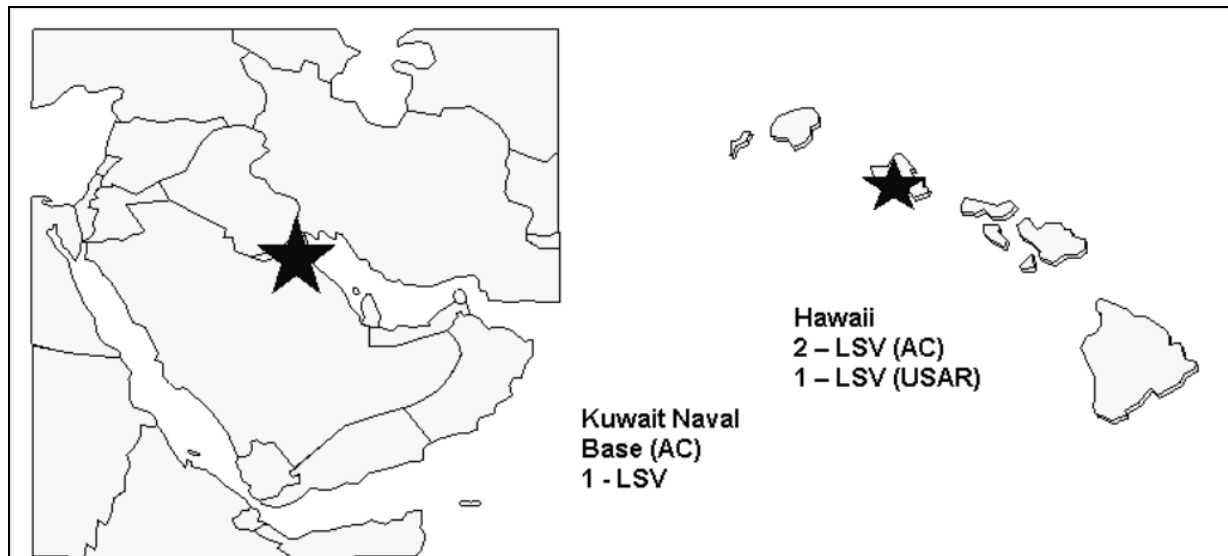


Figure 1. Forward-Based Army Watercraft⁴⁷

To project power on an expeditionary basis, force projection of CONUS-based forces remains a major means in U.S. strategy to protect its interests around the world. Force projection enables us to relocate military resources from CONUS or another theater in response to requirements to military operations.⁴⁸ Force projection is executed in five stages: mobilization (applies to Reserve forces only), deployment, employment, sustainment, and redeployment.⁴⁹ The force projection of JLOTS equipment primarily from the Active Component battalions at Joint Base Langley-Eustis provides the capability to overcome anti-access measures to seaports of debarkation. But this capability comes at the expense of time. On the other hand, JLOTS assets already in a theater of operations provide the Combatant Commander flexibility in employing and sustaining forces. They also provide the capability to move forces ashore when seaport access is denied.

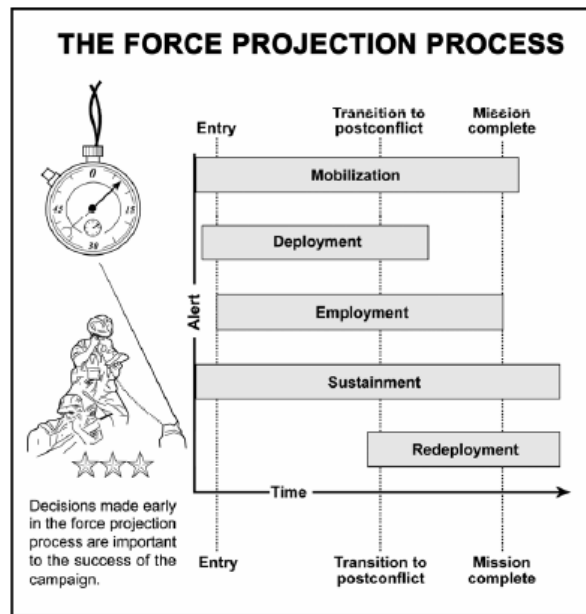


Figure 2. The Force Projection Process⁵⁰

U.S. military power projection installations and commercial seaports provide the infrastructure necessary to project U.S. military power around the world. Military installations contain assembly areas, truck docks, rail facilities, and heavy lift capable airfields – or access to other airfields through joint use agreements with commercial airports. CONUS stakeholders involved in the deployment process have invested heavily in enhancing CONUS deployment infrastructure in order to facilitate the movement of forces and cargo on an expeditionary basis. Their recent actions reflect a shift from the Cold War strategy that relied on forward presence. This new strategy relies on power projection.⁵¹ The Logistics Management Institute Report, *Joint Logistics Over-the-Shore: An Assessment of Capabilities*, describes the improvements: Military installations have constructed or renovated rail and container facilities; upgraded equipment and loading areas facilitates rapid truck-loading operations; and the nation's strategic commercial seaports have improved their capability to handle the Military

Sealift Command's Large, Medium-Speed Roll-on/Roll-off (LMSR) vessels and commercial roll-on/roll-off vessels.⁵²

These initiatives to improve deployment infrastructure have facilitated the rapid deployment of forces from CONUS and enabled the long-term rotation of forces during the wars in Iraq and Afghanistan. These initiatives also gave combatant commands reliable planning data for receiving forces within prescribed timelines from a predominantly CONUS-based power projection military.⁵³ But these enhancements have been limited by the forces' ability to receive cargo at destination ports. Large ships need access to deep draft, modern ports at both the seaport of embarkation and debarkation. So access to ports in many areas of the world may be restricted due to the size and draft of the ships. Potential adversaries may attempt to deny access to adequate seaports or the staging areas required to conduct Reception, Staging, and Onward Movement and Integration (RSO&I) activities. JLOTS capabilities for sea-to-land interface provide the means to overcome access challenges; JLOTS provides a critical alternative for employing and sustaining forces.⁵⁴

JLOTS capabilities have been tested and employed during multiple exercises and operations since the establishment of USTRANSCOM. A recent JLOTS operation involved the U.S. response to the earthquake in Haiti that devastated the infrastructure at its port in Port au Prince. The JLOTS operation in Haiti featured Navy LOTS support provided by lighterage aboard the Maritime Pre-positioning Ship (MPS) *Lummas*, which ferried cargo from ship to shore.⁵⁵ The *Lummas*' support to the humanitarian crisis in Haiti affirmed the importance of LOTS capabilities. Another JLOTS operation was conducted recently in support of resupply operations at McMurdo Station in Antarctica.

The operation at McMurdo Station demonstrated the utility of the modular causeway system. Soldiers launched warping tugboats from the *Green Wave* and then configured the modular causeway system section-by-section from the vessel into the water in order to discharge resupply cargo for the National Science Foundation.

The time required to move JLOTS equipment around the world affects response capability. The deployment of units with JLOTS capabilities varies for Active Component and Reserve Component units. Movement of JLOTS capabilities from the Reserve Component to the USCENTCOM area of responsibility in support of the Persian Gulf War in 1991 took up to 60 days.⁵⁶ There are a total of 59 JLOTS-capable assets permanently assigned in Active and Reserve Component units in CONUS.⁵⁷ Time is a critical factor for advantageous JLOTS capability, especially for support of Humanitarian Assistance, Disaster Relief (HADR) operations.

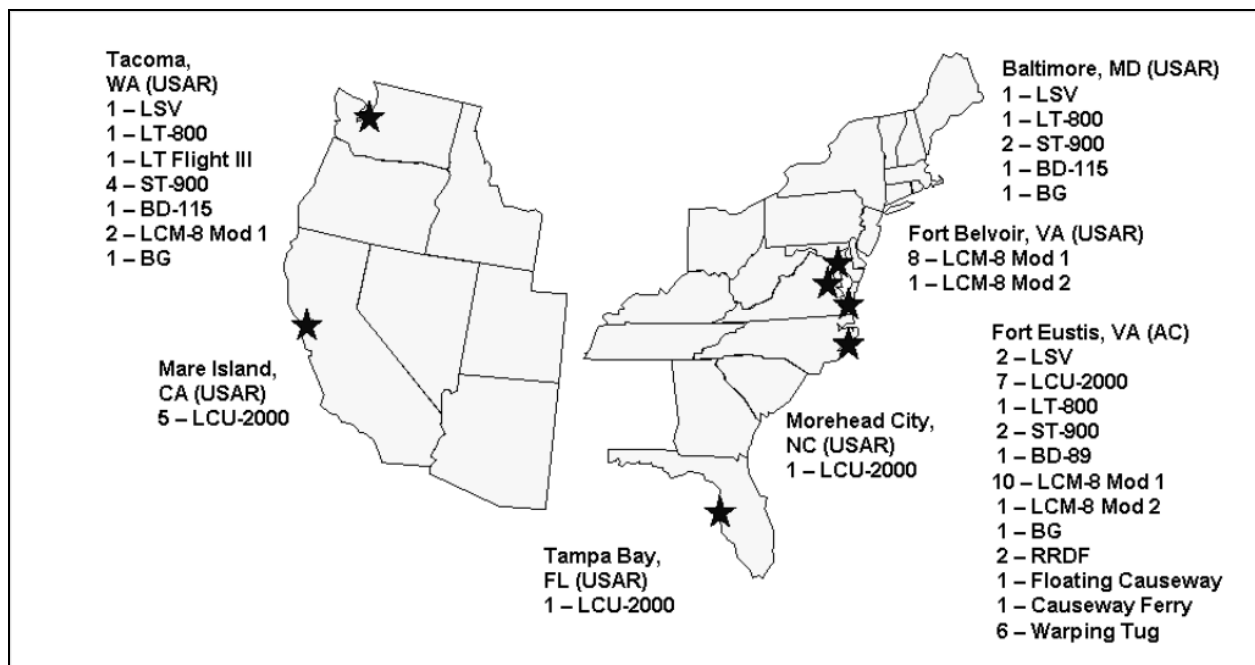


Figure 3. CONUS Based JLOTS Capabilities⁵⁸

Combatant commanders must submit a Request for Forces (RFF) to obtain additional JLOTS assets other than the few that are already forward-deployed to the USPACOM and USCENTCOM AORS.⁵⁹ Following approval, the deployment of JLOTS equipment adds additional time – time to either self-deploy, sealift, or issue the equipment from APS/MPS. These requirements delay access to these capabilities.⁶⁰ During Kosovo operations, it took 23 days to move two LSVs from CONUS to an equipment site in Italy.⁶¹ According to USTRANSCOM, JLOTS would have effectively supported strategic movement of forces and sustainment into a theater of operations during the U.S. response to the Southeast Asia tsunami in Japan.⁶² For the U.S. response to the earthquake in Haiti, USTRANSCOM noted the delay in movement of JLOTS assets to U.S. Southern Command while awaiting approval of an RFF.⁶³

The U.S. Army Transportation Corps is the proponent for Army LOTS programs and capabilities. Army watercraft and marine terminal units were borne out of necessity early in our nation's history; of course, the type of watercraft needed and their uses continue to evolve. Today, Army watercraft support maneuver and sustainment requirements in accordance with Joint and Army doctrine – primarily designed for Cold War operations. These units play a significant role in supporting expeditionary warfare and campaign operations. They are suitable for various types of operations: theater and port opening, maneuver support, distributed sustainment, and LOTS operations.⁶⁴

However, the capabilities that Army watercraft and marine terminal units bring to the Joint Force have diminished during the early 21st century. The U.S. military was then conducting land campaigns in Iraq and Afghanistan – operations logistically executed over road networks. Leaders and Soldiers familiar with these capabilities

began to disappear out of the total force due to force structure changes. The 7th Transportation Group – the functional headquarters that provided command and control and senior personnel expertise for Army watercraft units – reorganized into a sustainment brigade.⁶⁵ The Office of the Chief of Transportation (OCOT) then actively addressed the issue and advocated retention of these capabilities. The OCOT prioritized restoration of the Army's marine capabilities and assured access to these assets in combatant command plans. The enabling characteristics and specific considerations for employing JLOTS faced extinction without the OCOT's support. The Army watercraft and marine terminal community of interest needed a strong advocate to continue pushing the Army's force structure resourcing and equipment funding requirements.

As part of a long-term strategy to move combat forces and cargo to meet operational requirements, the Army Expeditionary Intermodal Operations (AEIO) concept addresses capability shortfalls and proposes doctrine and materiel and solutions. AEIO identifies capabilities to move personnel, equipment, and cargo into and through sea-based ports, land-based ports, and on to staging areas.⁶⁶ The AEIO addresses capability requirements to interface with other services, with the inter-agency, and with commercial platforms, ports, and facilities. A current shortcoming of JLOTS-capable equipment within both the Army and Navy is its lack of interoperability.⁶⁷ To upgrade JLOTS, Army leaders must replace vessels in the aging watercraft fleet and create solutions for connectivity with the future seabasing concept.⁶⁸ The AEIO cites four areas to develop in order to utilize Army capabilities for seabasing: connectivity to the Mobile Landing Platform, sea-state mitigation, dynamic positioning systems for Army

waterborne assets, and development of sea-based staging/support bases.⁶⁹ Once approved, the Initial Capabilities Document (ICD) for the AEIO concept will propose multiple materiel solutions for the Transportation Corps.

In order to increase the strategic relevance of JLOTS in the new strategic environment, the Army needs to explore interoperability within the Navy's seabasing concept. The capability to project power from the sea directly into an operational area despite A2/AD obstruction will be a primary requirement to overcome those challenges. Potential adversaries will deny entry to fixed ports and staging bases, so JLOTS capabilities to move cargo ashore could provide an alternate access to the area of operations. Seabasing currently relies on naval and expeditionary warfare to project power from the sea in order to ensure access to operational areas from the sea. This concept developed out of the U.S. Marine Corps' vision to provide a means to conduct operational maneuver from the sea without reliance on land-based facilities.⁷⁰ The concept not only envisions operational maneuver but also includes continuous support and sustainment of forces. Any future Army strategy to overcome anti-access challenges with JLOTS capabilities should be based on a thorough understanding of seabasing. This requires closer coordination and cooperation among the stakeholders for new material development, training, and doctrine in order to ensure success in the new strategic environment.

The seabasing concept faces challenges in assuring the effective participation of other services that have a stake in the concept. Currently, each service has its own perspective on the concept and its employment.⁷¹ The challenges arise from the parochial nature of each of the services' perspective on warfighting requirements set

forth in their Title 10 responsibilities. The JOAC stipulates that potential adversaries will employ A2/AD capabilities against our forces – one of most difficult operational challenges in the coming decades.⁷² Army watercraft and LOTS capabilities must consider interoperability as a means for enhancing seabasing operations. Interoperable equipment would facilitate transitions from ship-to-shore in order to move cargo in any A2/AD environment.

The challenges to development and employment of the seabasing concept diminish when the Navy and Marine Corps operate independently from the Army. A carrier strike group from the Navy or an expeditionary strike group from the Marine Corps is well-suited to conduct seabasing operations. Employment of Army assets becomes problematic for activating prepositioned afloat assets; they require uncontested environments for final configuration prior to their employment. In order for the Joint Force to realize the synergistic effect of major land forces, the Army must overcome current limitations in order to fully utilize the seabasing concept.

This SRP has analyzed the 21st century strategic challenges to the U.S. military to protect its national interests abroad. It focuses on how those challenges relate to the U.S. strategy shift to the Asia-Pacific region. It explains how Army watercraft and JLOTS enablers are relevant in a strategy that relies considerably on APS, forward-basing, and power projection. The RFF process and physical deployments present obstacles to access and quick response of JLOTS enablers. When these assets are already based or prepositioned in a theater of operations, the movement to an employment site can be slow because of the long sea lines of communication. The

AEIO and seabasing concepts are inextricably linked to the future of JLOTS; they will enhance JLOTS' strategic relevance.

JLOTS capabilities have been employed throughout history in amphibious operations conducted separately by the Army and the Navy or in joint operations. Both services should ensure that future development of materiel solutions provide necessary interoperability. Potential adversaries will attempt to deny access to fixed ports and land-based staging in the future operating environment. Seabasing provides a viable alternative to project forces. This alone warrants serious consideration of interoperability issues and acquisitions of common equipment.

JLOTS operations remain relevant in the new strategic environment. In order to provide combatant commands with strategic decision points on whether to conduct a JLOTS operation, JLOTS enablers must be prepared and within reach in order to contribute to commanders' responses to crises. USPACOM has already incorporated two LSVs operating in the Hawaiian Islands into its plans. Based on the strategic shift towards the Asia-Pacific, this analysis supports a recommendation that the Department of the Army G4 review the current APS-4 prepositioned assets and USPACOM requirements. The LCUs prepositioned in APS-4 should be released on a more routine basis to support U.S. Forces Korea (USFK) and U.S. Forces Japan (USFJ) – and possibly operations in the vicinity of the South China Sea. Available to rotational forces, those LCUs would be instrumental in support operations and in foiling A2/AD efforts. The movement of CONUS based-assets to USPACOM AOR would take too long to support a credible response. A combination of forward-stationing and prepositioning of JLOTS enablers in the USPACOM AOR mitigates future A2/AD challenges.

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